Quantum

Q100T/Q100TH

Quick Guide

Quantum

Quantum s.r.l
Via Cadorna, 67 - 20090 Vimodrone (MI)
Www.qtmtv.it

Index

Warning	Page	3
Precautions and safety	"	4
Remote control	"	5
DVB-T First Use	"	6
DVB-T Daily Use	"	8
Audio/Video switch	"	10
Multimedia	"	11
Receiver Menu	"	12
Settings	"	12
Tv List	"	14
Diagnostics	"	15
DVB-H Mode (*)	"	16
DVB-H PayTV (*)		17
Installation		19
Installation and Connections	"	20
Technical features	"	24
Warning	"	25
Warranty	"	26

EQUIPMENT

Each box contains:

① RECEIVER
② REMOTE CONTROL
③ REMOTE INFRARED SENSOR
④ POWER CAR CABLE
⑤ QUICK GUIDE

(*) applicable only to Q100TH version

Warranty

Warranty

Dear customer,
thank you for choosing our product, which has been designed and manufactured to the highest quality standards.

- The product is covered by a warranty, for a period of 24 months, which is testified from a delivery document indicating the date of purchase of the product and the dealer's name.
- The customer is entitled to the rights provided for by Legislative Decree n° 24/2002
- The warranty covers the replacement or the repair operation of all the parts found to have manufacturing defects.
- The warranty does not cover:
  - › failures caused by carelessness or transport.
  - › failures caused by installation not in accordance with the instructions
  - › failures caused by improper, incorrect or not in accordance with the instructions, use of the device
- The manufacturer cannot be held responsible for accidental damages to persons, pets, or things, as a consequence of non-conformity with all the precautions furnished with the instructions manual.
  - › In the event you require service, during the warranty period, you should fill in and show the present certificate, together with a valid receipt issued by the dealer, showing the date of purchase of the product.

WARRANTY VOUCHER

DEALER'S STAMP AND SIGN

Model .....

Serial number .....

Defect found .....

Customer signature

Date __/__/__ .....

To return correctly filled in together with the purchase receipt

Warning

CAUTION

⚠ This symbol means important instructions. Failure to heed them can result in serious injury or death

DO NOT OPERATE ANY FUNCTION THAT TAKES YOUR ATTENTION AWAY FROM SAFELY DRIVING YOUR VEHICLE

Any function that requires your prolonged attention should only be performed after coming to a complete stop.
Always stop your vehicle in a safe location before performing these functions. Failure to do so may result in an accident.

USE THIS PRODUCT FOR MOBILE 12/24 Vcc APPLICATIONS AND NEGATIVE GROUND

Any misuse that diverts from the designed application may result in fire, electric shock or other injury.

DO NOT DISASSEMBLE OR ALTER THE UNIT

Doing so may result in accidents or injuries.

USE THE CORRECT AMPERE RATING WHEN REPLACING FUSES

Failure to do so may result in fire or electric shock

STOP USE IF A PROBLEM APPEARS

Failure to do so may cause personal injury or damage to the product.

DO NOT USE OLD BATTERIES

When inserting batteries in the remote control, be sure to observe proper polarity as instructed. Rupture or chemical leakage from the battery may cause malfunction ing, break or injury.

IMPORTANT:

Quantum S.p.A. declines all responsibibty for any errors or omissions in this guide and reserves the right to make changes without prior notice.

The information given in this guide were correct at the time of going to print.

Precautions and Safety

PRECAUTIONS

TEMPERATURE

Be sure the temperature inside the vehicle is between +45°C and 0°C before turning your unit on.

FUSE REPLACEMENT

The replacement of the fuses must be of the same amperage. If one fuse blows more than once, carefully check all electrical connections to prevent short circuits. Also have your vehicle' s voltage regulator checked.

MAINTENANCE

If you have problems, do not attempt to repair the unit yourself. Require assistance at the nearest retailer or service station.

INSTALL LOCATION

Install in dry, safe locations, away from dangers and humidity.

INSTALLATION PRECAUTIONS

Use only in cars with a 12/24 Vcc negative ground.

Before connecting the device remove the negative terminal from the battery to prevent short circuits.

Do not use bolts or nuts related to any safety system (airbag, etc.), To make ground connection.

CAUTION

WATCHING TV WHILE DRIVING MAY RESULT IN SERIOUS ACCIDENTS, INJURIES OR DEATH!

SAFETY

VIDEO OUTPUT

In order to ensure vehicle safety, the driver's side screen must be connected to the front video output connector. This will ensure the driver won't be able to watch TV while the vehicle is moving, if the handbrake wire is properly connected. The driver will be able to watch TV once the handbrake is pulled. The rear passenger screens, connected to the rear video output connectors, do not fall under this restriction.

Warning

Q100 series complies with:

E24: according to ECE R10-03 Regulation

DiGiTVi: specifications D-Book ver.1.0 - June 2004 and following updates where available

CAUTION:

Your receiver is supplied with an operating system and resident programs.

While using the receiver, various software could be downloaded.

You should NOT use improperly any of these softwares wholly or partly for any reason other than that mentioned in the user manual.

Improper use means: duplication, distribution, tampering. In other words, that the only allowed usage in the one described in this user manual.

Technical features

Mobile DVB-T signal reception

Autotracking/Autosearch

Favourite Channels List

2 video output for two separated monitor

1 audio stereo output

1 video input

1 audio stereo input

Audio/video digital quality

Easy and fast plug-and-play installation

DVB-T

ISO/IEC 13818-1 MPEG-2 Transport Stream
ETS 300 744 DVB-T Full Compliance
VHF (Band III) / UHF 21-69
DVB-T COFDM 2k/8k supported
7,8 mhZ bandwidth support

DVB-H (*)

OSF IPDC ESG compliant
UHF bandwith, channels 21-69
COFDM 2k/4k/8k supported
6,8 mhZ bandwidth support

Video Decoding and OSD
Advanced high definition video decoding (H264)
Advanced standard definition video decoding (H264/MPEG2)
Resolution: 720x576 for PAL
16:9/4:3, 3:2 Letterbox and Pan/Scan
65K Colour OSD

Audio Decoding
Advanced multi-channel audio decoding (MPEG 1, 2, MP 3, AAC/AAC+)
Stereo / MTS

Connections
IR Remote Connector
Antenna-In : Fakra type 2x
Audio stereo Output (RCA L/R) 1x
Composite Video Output (RCA) 2x
Stereo Audio Input (RCA L/R) 1x
Composite Video Input (RCA) 1x

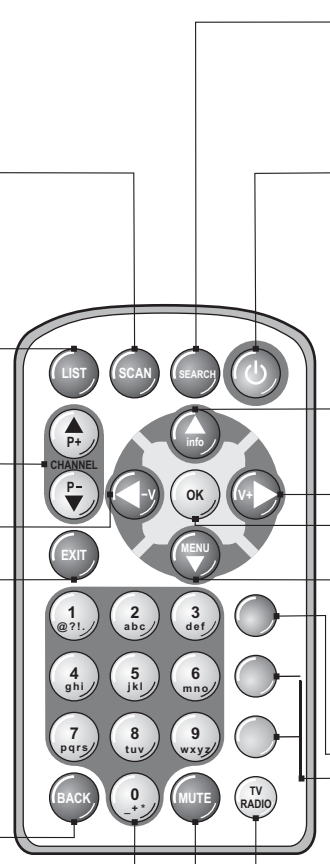
Safety and Reliability
Operation temperature : -5 C ~ +55 C
Storage temperature : -45 C ~ +85 C

Comsuptions
0.7 A in full operation powering two antennas
0.65 A in stand by
500 microA when off (car key off)

Mechanical Specification
Dimensions (WxDxH): 148mm x 107mm x 35mm

(*) applicable only to Q100TH model

Remote Control



SEARCH
to manually search/track a tuned channel

SCAN
to start autoscan

STAND-BY
to put the unit on stand-by and switch to a/v input

LIST
to view channel list

UP BUTTON
to view info on a program or navigation button

P+/-
zapping channels

RIGHT BUTTON
navigation or volume adjust button

LEFT BUTTON
navigation or volume adjust button

OK
to select a function or to confirm the selection

EXIT
to exit from the selected option

DOWN BUTTON
navigation button

RED (*)
Options list

BACK
to return to the previous page (where available)

BLUE, GREEN
navigation buttons

0...9
alpha/numerical button

TV/RADIO - YELLOW
to switch between TV/Radio listing

MUTE
to switch on/off the audio input

DVB-T First Use

Q100 series is an automotive grade set top box - able to receive multi-standard DVB digital TV: DVB-T in standard definition (SD) and high definition (HD) and DVB-H.

By pressing the [Red] button on the remote control, one could switch from DVB-T mode to DVB-H mode.

❖ Getting started

Be sure that every connection has been correctly set following installation instructions on pages 19-22

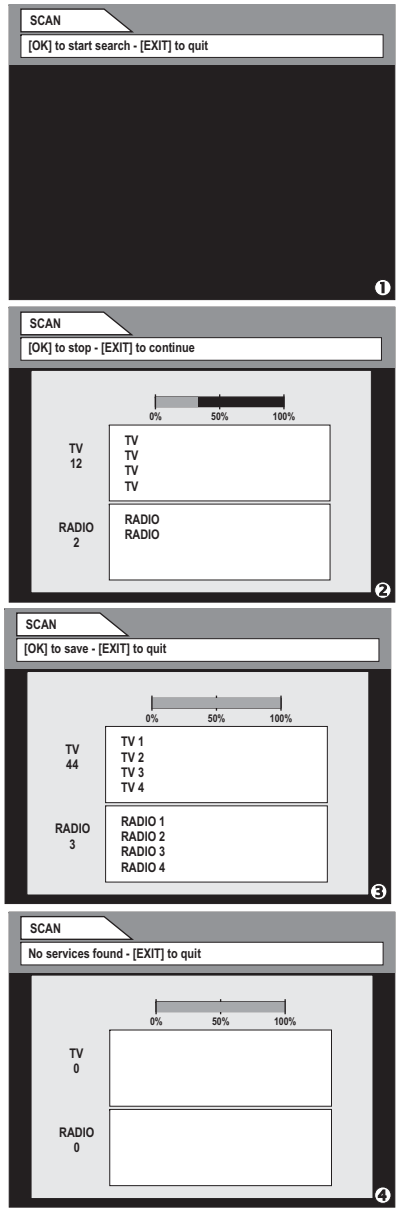
Turn the unit on

- Please wait until frame① will be shown on the screen .
  - › press [OK] button to start the automatic channel search.

    It's possible to stop the search by pressing EXIT button. Frame② will be shown on the screen. Press [OK] button to confirm stop searching or the [EXIT] button to resume it.

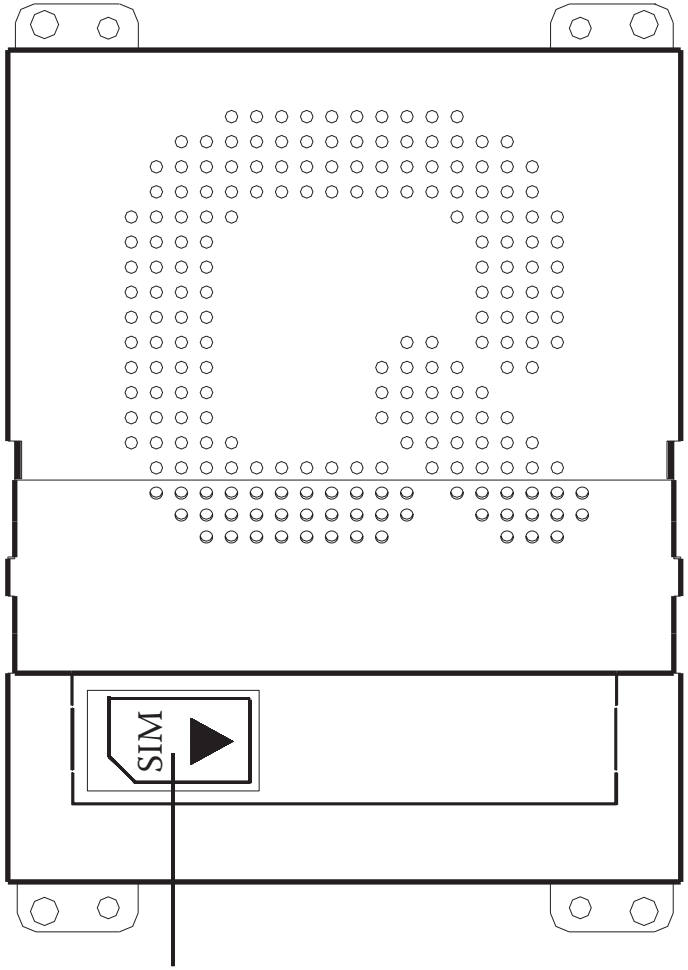
    At the end of the scan phase, frame③ will be shown on the screen.
    - › press [OK] button to save the channels in the TV LIST. The first channel in the up-to-date TV LIST will be shown on the screen.

      If at the end of the scan phase, frame④ is shown on the screen check the connections and the overall installation of the receiver; then press sequentially the [EXIT], [SCAN] and [OK] buttons to restart the scan phase.



Installation and Connections (*)

SIM INSERTION (*)



In the case of an existing DVB-H PayTV subscription SIM based, please insert SIM card as shown in the picture

(*) applicable only to Q100TH model

TV ANTENNAS

Specifications

❖ TECHNICAL FEATURES

+ 5V DC PHANTOM POWERED DVB-T ANTENNAS

Operation frequencies:	174 - 230 (band III) 470 - 866 (bands IV - V)
Gain:	18 dB Max
Cable type:	coaxial 75 ohm
Cable lenght:	5 m
Connector:	type FAKRA
Power:	+5 Vcc
Consumption:	25mA min - 35 mA max
Temperature range :	- 40° <> +85° C
Protection class:	IP40
Size (L x B x H):	28 x 2,5 x 1,5 cm

❖ Autotracking and Autosearch

This innovative automatic function allows the receiver to follow the selected channel while moving from place to place.

Typical DTT Networks are Multi Frequency Network (MFN) that is, each TV channel may be transmitted on different frequencies depending on the specific geographical area.

Once a specific TV channel has been selected the, Autotracking and Autosearch functions have the purpose of tuning, tracking and in some cases automatically searching for the channel where there is a frequency change or signal loss due to movement in location, without the need to start a new search manually..

In order to have the Autotracking and Autosearch function perform in the best possible way, it is recommended to carefully the instructions below:

1. **Start an AUTOSCAN** - Tune the available channels in that specific area by pressing [SCAN] button ①
2. **Create a FAVOURITE TV LIST (from menu)** - This enables you to define and organize the list of your favourite channels ②
3. **Select the FAVOURITE TV LIST as default** ③

If autosearch does not allow the tuning into of all the favourite channels, re-start operations by doing point 1 and 2 in an other geographic area.

WARNING: channels marked in red are temporarily not available due to the lack of network coverage ④.

DVB-T Daily Use

❖ How to switch the receiver on

Depending on the specific car installation, the receiver will be switched on as soon as the car key turns on the battery. In case an external a/v source was previously activated, please use the [⏻] button on the remote control① to exit stand-by mode.

❖ How to select a channel

A Tv or Radio channel can be selected in three different modes:

- DIRECT: select the desired channel by using the numerical buttons ⑤
- ARROWS ZAPPING: select the desired channel by using the up/down buttons[▲] and [▼]⑦ and press [OK]③ to confirm the selection.

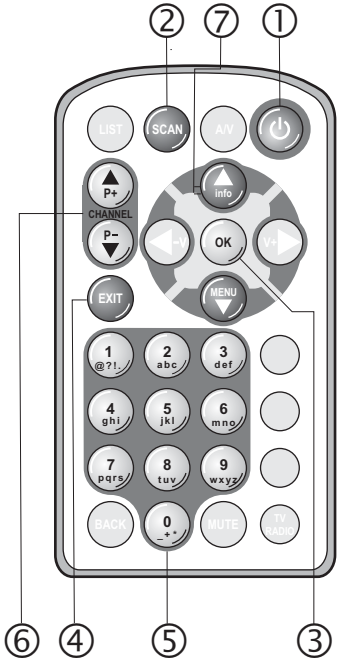
  INFORMATION BAR will be previewed on the screen⑧ before the channel tuning.
- DIRECT ZAPPING: press [P+] [P-]⑥ to browse directly trough the channels without using the [OK]③ button.

❖ Teletext (*)

- Press either the [Red] button. The option list will be displayed
- From the list press [Green] for Teletext OR using the up/down buttons [▲] and [▼] select Teletext, press [OK].

  If the relevant digital service includes Teletext information, an OSD emulation of the Teletext home page will be displayed (page nr.100).

  All available pages can be accessed selecting relevant number (using digits buttons) from the remote control.



(*) applicable only to Q100T model

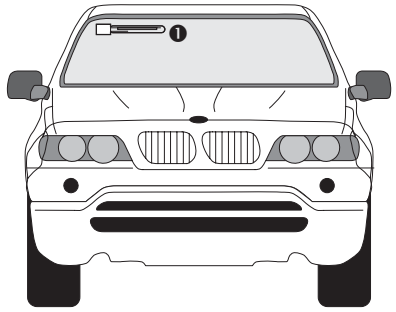
Installation and Connections

TV ANTENNAS

Recommendations

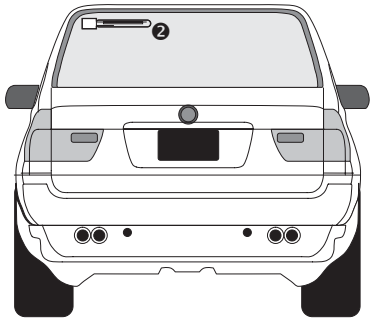
Use only active antennas that are amplified adequately and directly powered by the receiver's antenna connectors. The antenna should be suitable for the reception of the Digital Terrestrial signal.
Quantum Antennas are manufactured and linked to the Q100 receiver in order to optimize performance

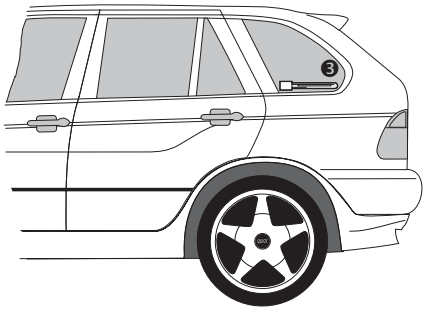
WARNING: ONLY use the Quantum antenna provided. Use of different antenna or other external power may result in product damage and might affect the warranty terms.



❖INSTALLATION GUIDELINES

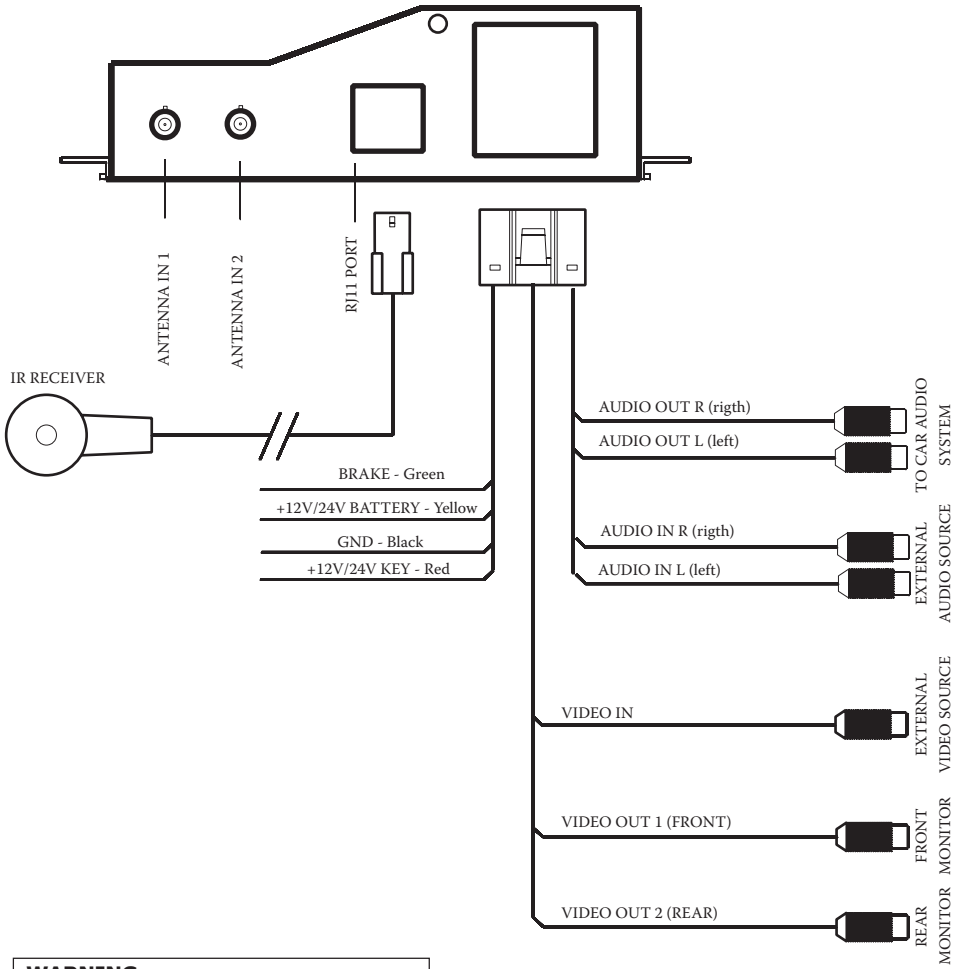
- Be sure to position the antennas as far away and opposing from each other as possible. For example, place the first antenna on the right side of the wind screen of the vehicle① and the second one on the left side of the rear window② or on the left rear vent wing③.
- Antennas must be installed as far away from the metal parts (vehicle's roof or vertical borders of the wind screen/rear vent wing) as possible.
- The bonnet or the boot (depending on the vehicle) can influence the signal reception. It is recommended to test various positions to place the antennas, whether on the higher or the lower part of the window. The higher part usually guarantees more protection from noises caused by motorcycles and scooters.
- Handle the coaxial cable setting with care in order to avoid damages due to vibration or crushing.
- Be sure that the connections have been correctly set and check the screwing of the connectors. Signal reception problems are often caused by incorrect assembly.





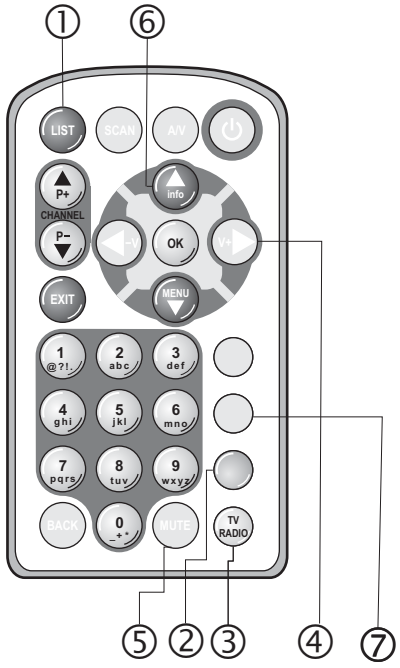
Installation and Connections

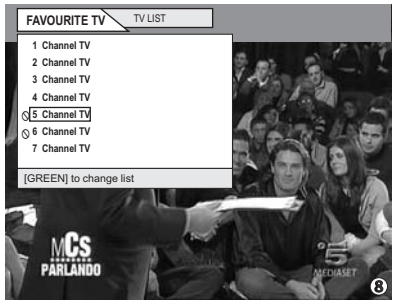
FRONT PANEL



WARNING:
+5V PHANTOM POWER IS PRESENT IN ALL "ANTENNA IN" CONNECTORS

DVB-T Daily Use





❖ How to select a channel in a TV/Radio List

- Press [LIST]① to show the Tv List
  - › Press [GREEN]② to switch between the general TV LIST and the FAVOURITE TV LIST if previously preset [see MENU]
- Press [TV/RADIO]③ (yellow) to show the RADIO LIST
  - › Press the same button to switch between the Radio List and the previously selected TV LIST
- Select the desired channel

WARNING: channels marked in red are temporarily not available due to lack of network coverage ⑧

❖ How to adjust the volume level

The volume level can be adjusted by using the [VOL+] [VOL-] buttons

❖ Mute

- Press [MUTE]⑤ button to switch on/off the audio output

❖ How to view program info

- Press [info]⑥ to view short informations about the selected program
- Press [BLUE]⑦ to get detailed informations about the selected program

❖ How to select the audio language

To select the desired language (when more languages are available):

- Press [info]⑥ + [GREEN]② and select the desired language by using the up/down[▲][▼]⑥ buttons

❖ How to select subtitles (*)

To select the desired subtitle (when available):

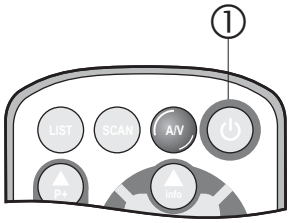
- Press [info]⑥ + [GREEN]② and select the desired subtitle option by using the up/down[▲][▼]⑥ buttons

(*) applicable only to Q100T model

Audio/Video switch

❖ Audio/video Inputs

The receiver enables the user to connect an external audio/video source (e.g. Videogame console, Dvd player, etc..) to the audio/video input (as shown at page 17) and to select it through the remote control



• How to select audio/video input:

Using the Power button of the remote control ① the user may switch from digital Tv signal to external source signal and viceversa.

WARNING: FRONT monitor should be enabled only once the handbrake control is activated.

Installation

WARNING:

⚠ Before installing the device read carefully the following instructions

HAVE THE INSTALLATION DONE BY QUALIFIED PERSONNEL

The installation and wiring of this unit requires special technical skills and experiences. To ensure safety, always have the installation done by experts

USE SPECIFIED ACCESSORY PARTS

Be sure to use only the specified accessory parts. Use of accessory parts other than designed may damage this unit or cause incorrect functioning of the appliance

ARRANGE THE WIRING CORRECTLY

Route the electrical and audio/video cables, wiring away from moving parts and sharp/pointy edges.This will prevent crimping and damage to the wires. If wiring is passing through a metal hole, use of a rubber grommet can act as a form of insulation preventing the wires from being cut by the metal edges of the hole.

DO NOT INSTALL IN LOCATIONS WITH HIGH MOISTURE OR DUST

Avoid installing the unit in locations with high levels of moisture or dust. Prenetration of moisture or dust may result in product failure.

MAKE THE CORRECT CONNECTIONS

Failure to make the proper connections may result in product damage

USE ONLY IN CARS WITH A 12 / 24 Vcc NEGATIVE GROUND

Failure to do so may result in fire, electric shock or other injuries

BEFORE WIRING DISCONNECT THE CABLE FROM THE NEGATIVE (-) BATTERY TERMINALS

Failure to do so may result in electric shock or electric shock injuries.

DO NOT SLICE INTO ELECTRICAL CABLES

Never cut away cable insulation to supply power to other equipment. Doing so will exceed the current carrying capacity of the wire and result in fire or electric shock

DO NOT USE BOLTS OR NUTS IN THE BRAKE OR STEERING SYSTEM TO MAKE GROUND CONNECTIONS

Bolts or nuts used for the brake or steering systems (or any other safety-related system), or tanks should NEVER be used for installations or ground connections

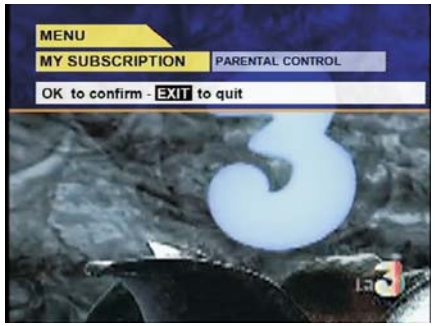
DO NOT INSTALL IN LOCATIONS WHICH MIGHT HINDER VEHICLE OPERATION, SUCH AS THE STEERING WHEEL OR GEARSHIFT

Doing so may obstruct forward vision or hamper movement etc., and result in serious accident

DVB-H PayTV Menu (*)

In case of DVB-H PayTV services, the user may use the DVB-H menu to have access to the following options:

- My Subscription info
- Parental control settings



❖ My Subscription

With such option the user may display the list of subscribed packages (if broadcasted by the DVB-H Operator).

♦ **How to view subscribed package**

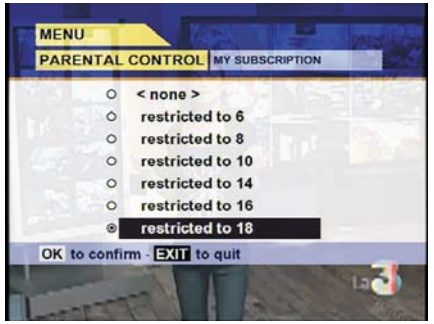
- press [MENU]
- select MY SUBSCRIPTION by using the right and left [◂] [▸] buttons
- press [OK] to confirm the selection or [EXIT] to cancel.

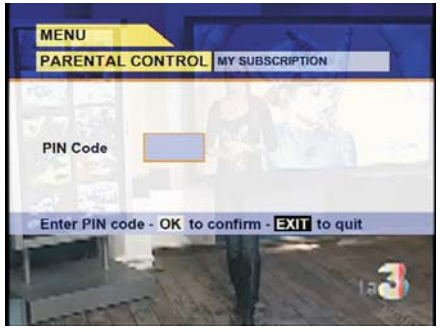
If available, the list of subscribed packages may be displayed.

❖ Parental Control

To access restricted channels a PIN code is needed. This is provided with the SIM.
The restriction level may be set in the following way:

- press [MENU]
- select PARENTAL CONTROL by using the right and left [◂] [▸] buttons
- press [OK] to confirm the selection or [EXIT] to cancel.
- browse the list sequentially by using the up and down buttons [▲][▼]
- press [OK] to confirm the selection or [EXIT] to cancel.
- Enter PIN code to apply the changes





(*) applicable only to Q100TH model

Multimedia

❖ MULTIMEDIA

Q100 series is able to support multimedia files stored on a USB key (ver. 1.1).
Insert USB key in the Q100 USB plug.

Supported format is:
.AVI for video files
.Mp3 for audio files

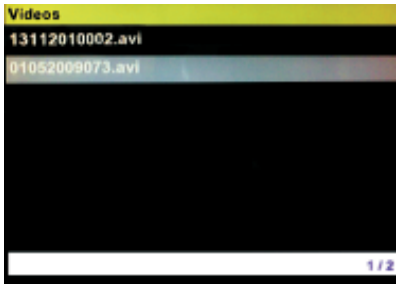
Max resolution supported is SD (720x576).

❖ How to show the list of multimedia files

- Press [RED] button of the remote control
- Select multimedia option from the list and press OK
- Select Video/Audio option to display Video/Audio files stored in the USB key.

❖ How to play a multimedia file

- From the list of available Video/Audio files, select one file and press [OK] button. The Video/Audio player will automatically start playing the file.



❖ How to display options:

Press [INFO] button of the remote to display progress bar and options, in particular:

[RED] button, to seek back the file

[BLUE] button, to stop playing

[GREEN] button, to pause/play the file

[YELLOW] button, to seek the file

[BACK] button, to go back in the file list

❖ How to quit multimedia section

Press [EXIT] button of the remote to quit Multimedia section and go back to digital TV channels.

Main Menu - SETTINGS

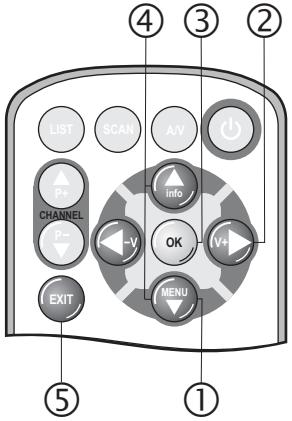
❖ MAIN MENU

The main MENU may be used to see system info and/or set user's preferences.
The following options are available:

Sub-menus:

- SETTINGS
- TV LIST
- DIAGNOSTICS

To display main menu press [MENU] of the remote control.

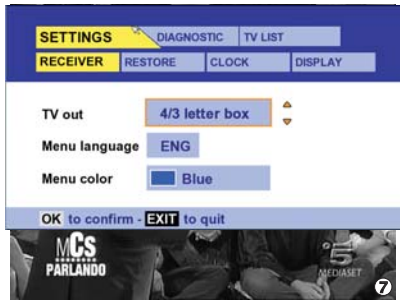


❖ SETTINGS

This sub-menu shows the data related to:

- RECEIVER
- RESTORE
- CLOCK

WARNING: Be careful not to accidentally change the parameters. this will aid to the misfunctioning of the device. Default settings are normally used for standard installation. They can be restored through the RESTORE function.



♦ How to navigate the Settings Menu

- Press [MENU]② to view the main menu on the screen
- Select SETTINGS by using the right and left [◂] [▸]③ buttons.
- Press OK to enter this sub-menu and then press it again till you get the required item
- Select the desired function firstly by using the right and left buttons [◂] [▸]③ and then the up and down [▴] [▾]④ buttons
- Press [OK]④ to confirm the selection and to move to the next function or [EXIT]⑤ to cancel the selection

DVB-H PayTV (*)

When using the PayTV option, to have access to the encoded channels the user must have a valid subscription with the Operator which is broadcasting the DVB-H signal.
Once the subscription is in place, the Operator provides a smart card (SIM card) that will be used to decrypt channels.
Please refer to page 23 to insert SIM card into the relevant SIM slot of the unit.

❖ Subscription

If a valid subscription is in place, all TV channels available with that subscription will be accessed without distinction between free to air and Pay channels.

In the case where the SIM card is not related to the rigth DVB-H Operator or the SIM card is not properly inserted in the unit's slot, message (1) may be displayed.
Please check the SIM card again.

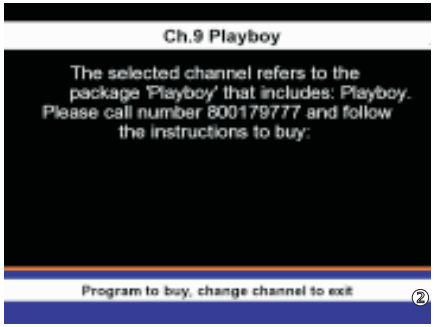
In the case where the subscription has expired or a new package subscription is required, message (2) may be displayed.
To renew subscription refer to the displayed message.

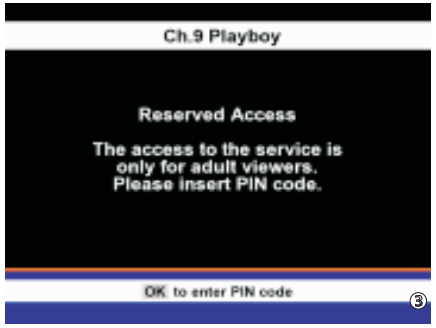
❖ PIN Code

The subscribed package may include specific channels (adult channels) that may require a Parental PIN code to have full access (3).

Press [OK] and insert PIN code using remote control digits [1,2,..] then press [OK] again to confirm.

Please note that PIN code is provided together with the SIM card.


Ch.9 Playboy
The selected channel refers to the package 'Playboy' that includes: Playboy. Please call number 800179777 and follow the instructions to buy:
Program to buy, change channel to exit
②


Ch.9 Playboy
Reserved Access
The access to the service is only for adult viewers. Please insert PIN code.
OK to enter PIN code
③

(*) applicable only to Q100TH model

DVB-H mode (*)

Be sure that every connection has been correctly set, as shown on page 20 and 23.

❖ Getting started

Once the unit is ON, please use the red button of the remote control to switch from DVB-T mode to DVB-H mode and viceversa.

For first time use (after a power off/on) when the DVB-H mode is entered, the device will automatically scan UHF bandwith (channels 21-69) to search for the pre-configured DVB-H listing the user has subscribed (1).

Once the listing is found (2), the unit will download related EPG (electronic program guide) and will tune and displays the first digital TV channel of the list.

❖ Zapping

Use P+ and P- buttons of the remote control to zap the available digital channels.

❖Channel List

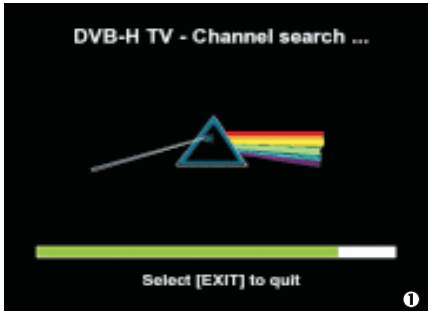
Press [LIST] to show the TV List (3)

Select the desired channel by using the up/down buttons[▲] e [▼] and press [OK] to confirm the selection.

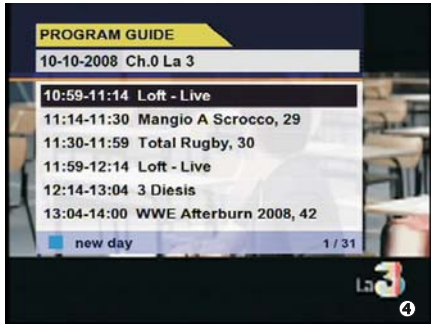
❖ Program Guide

Once the TV List is displayed:
If available, press [GREEN] button to view program guide (4) of the specific channels sorted by time.

Press [BLUE] button to view a new day program guide



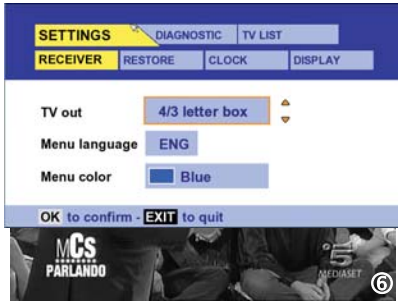
TV LIST
TV
0 La 3 - Loft - Live
1 RAI 1 - Occhio alla spesa
2 RAI 2 - Raidue presenta Insieme sul D...
3 Mediaset - FORUM
4 Boing - Gli amici immaginari di Casa F...
5 SKY Meteo - SKY Meteo24
6 SKY Sport - Golf: PGA European Tour
program guide
1 / 15
❸



(*) applicable only to Q100TH model

Main Menu - SETTINGS

◆ RECEIVER⑥



- **TV OUT**
  Set tv out mode according your screen type⑦:
  - › 4:3 pan & scan
  - › 4:3 letter box
  - › 16:9
- **MENU LANGUAGE**
  To select the menu language
- **MENU COLOR**
  To set color of menu

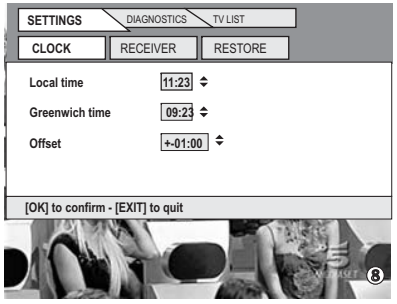
◆ RESTORE⑦

This function enables the user to reset the input data among the following categories:

- **RECEIVER DATA**
  To reset settings, system and installation parameters
- **CHANNELS LIST**
  To delete all the channels lists

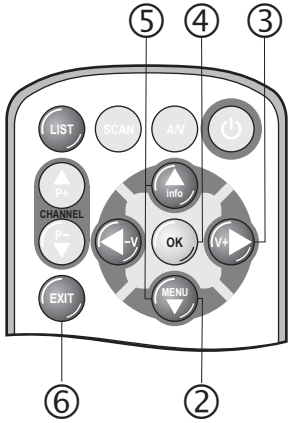
It is possible to make a completely restore the data by selecting both items.

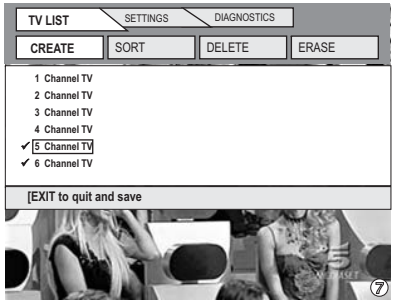
◆ CLOCK⑧

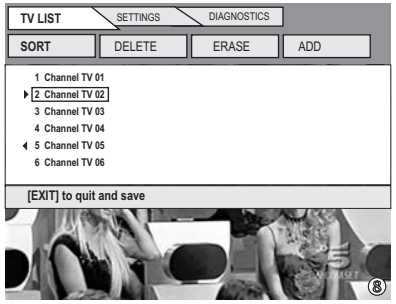


The receiver's clock will be automatically updated through the tv signal. It's possible, if desired, to change the time zone, set at GMT+1 by default

Main Menu - TV LIST







❖ How to manage the Favourite Tv List

It is possible to create a personal favourite Tv List.
TV LIST and RADIO LIST are all the tuned channels so they are not initially personalize.

1. How to create the Favourite Tv List:

- press [MENU]②
- select TV LIST and press [OK]④ to confirm
- select CREATE and press [OK]④ to confirm
- browse the list sequentially by using the up and down buttons [▲][▼]⑤ , or in groups of six channels by using right and left buttons [◀][▶]③ and select the channel
- press [OK]④ to confirm the selection. A tick signal ✓ will be shown next to the selected channel⑦
- if you want to cancel the selection press [OK]④ again and the tick mark ✓ will be deleted

2. How to delete a channel from the Favourite Tv List:

Follow the same procedure as shown at the point 1 and replace CREATE with DELETE.

3. How to sort the Favourite Tv List:

- press [MENU]②
- select TV LIST and press [OK]④to confirm
- select SORT and press [OK]④to confirm
- browse the list sequentially by using the up and down buttons [▲][▼]⑤ or in groups of six channels by using the right and left buttons[◀][▶]③ and select the channel you want to move
- browse the list in the same way and click on the position where you want to move the selected channel. A tick mark◀ will be shown next to the selected channel
- press [OK]④ to confirm the new position of the channel ⑧

4. How to delete the Favourite Tv List:

Follow the same procedure as shown at the point 1 and replace CREATE with ERASE

Main Menu - DIAGNOSTICS

❖ DIAGNOSTICS

The receiver can provide the following diagnostics information:

- SIGNAL QUALITY
- RECEIVER INFO

♦ **How to view the DIAGNOSTICS:**

- press [MENU]
- select DIAGNOSTICS by using the right and left [◀] [▶]② buttons
- press [OK]③ to confirm the selection or [EXIT]⑤ to cancel it.